

## ABSTRACT

Syringes and methods of using are described which protect the syringe barrel cavity from contaminants. A first syringe is formed with a corrugated sheath which encloses the plunger and space between the rearward end face surface of the syringe barrel handle member and the forward face of the plunger handle member. A second syringe is formed with a syringe barrel having a straight segment and a corrugated segment having the forward face of the plunger handle member molded to the rearward terminus of the corrugated segment of the syringe barrel. A third syringe is formed from mating syringe barrel and plunger member walls. The walls of the mating syringe barrel and plunger member are concentric and slide relative to each other while maintaining an enclosure around the plunger shaft. A fourth syringe is formed from inner and outer concentric syringe barrel walls mating with the walls of a plunger member. The mating walls are concentric and slide relative to each other while maintaining an enclosure around the plunger shaft. A fifth syringe is formed with an end cap contaminant shield having an extension wall that is mated with the rearward end opening of the syringe barrel cavity. Alternatively, the end cap contaminant shield can be provided with a flat design without the extending wall and is bonded or molded to the rearward end terminus of the syringe barrel. The end cap contaminant shield designs are provided with an opening defining the shape of the cross-section of the plunger shaft.

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